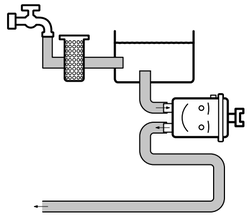
Trouble shooting
-Open ended water systems

-Closed water systems



No water supply

Is the water supply OK?
Is water supplied to the pump?
- No
- Yes

Is water coming out the tap?
Are all taps open?
- No
- Yes

Is the control light for “low pump suction pressure” on?
The filter is clogging
- Yes
- No

Is water coming through the filter?
- Yes
- No

Replace filter element

Turn on the tap for water supply

Is the electric motor of the pump unit rotating?
- No
- Yes

Is the water in the tank very hot?
I.e. above 50°C
- Yes
- No

Lower inlet temperature or provide better cooling.

Is the power supply OK?
Are control lights on?
- No
- Yes

A blown fuse / or short circuit?
Check power supply and fuses and contact electrician

Is the filter clogged?
Is the filter control light on?
- No
- Yes

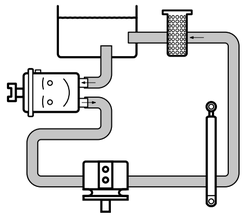
Replace filter element

Contact serviceman.

Stamp

-Open ended water systems

Trouble shooting
-Closed water systems



The system does not work

Is there sufficient water in the tank?
- No
- Yes

Fill water into the system

Trace leakage, if any

Is the electric motor of the pump unit rotating?
- No
- Yes

Is the water in the tank very hot?
I.e. above 50°C
- Yes
- No

At temperatures higher than 50°C the pump drive cuts out. Consequently, the cooler must be checked/cleaned.

Is the power supply OK?
Are control lights on?
- No
- Yes

A blown fuse / or short circuit?
Check power supply and fuses and contact electrician

Is the filter clogged?
Is the filter control light on?
- Yes
- No

Replace filter element

Contact serviceman.

Stamp

DK-6430 Nordborg
Denmark

DKCFN.PI.000.C2.02 521B0758 180R9042

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Danfoss High-Pressure Water Solutions

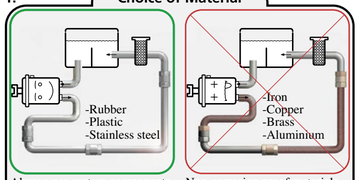
– Right and Wrong in:

- Design
- Installation
- Wiring

Trouble shooting guide for water hydraulic systems

Design

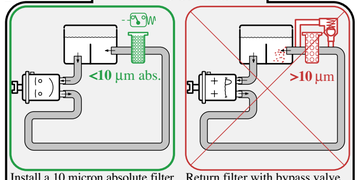
1. Choice of Material



Always use system components made of corrosion proof materials.

Non-corrosion proof materials. may cause damage.

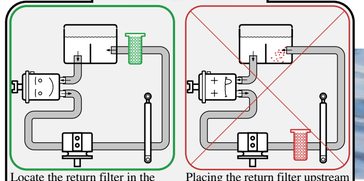
2. Choice of Filter



Install a 10 micron absolute filter with pressure switch.

Return filter with bypass valve and poorer filterability than 10 µ will damage the system.

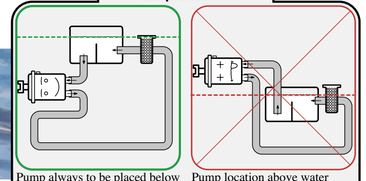
3. Filter Location



Locate the return filter in the return line immediately before the tank.

Placing the return filter upstream of the final load may damage the pump.

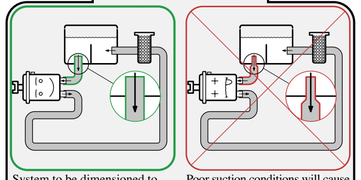
4. Pump Location



Pump always to be placed below water surface level.

Pump location above water surface level will cause damage.

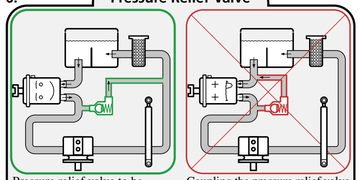
5. Suction Conditions



System to be dimensioned to provide a suction pressure of the pump inlet of max. 0,1 bar vacuum.

Poor suction conditions will cause malfunction and damage the pump.

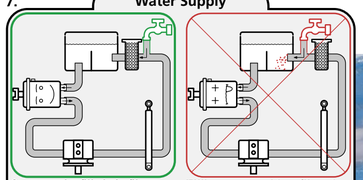
6. Pressure Relief Valve



Pressure relief valve to be mounted vertically or with vertical outlet and connected to return hose or tank.

Coupling the pressure relief valve outlet directly to the pump inlet may damage the pump.

7. Water Supply

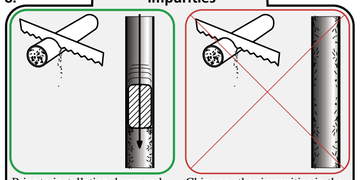


System to be filled via filter.

Filling system with unfiltered water causes damage.

Installation

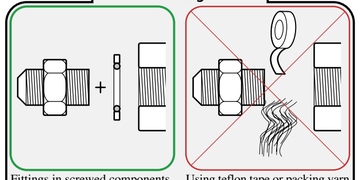
8. Impurities



Prior to installation, burrs and chips and other impurities must be removed from pipes and hoses, e.g. with a felt plug.

Chips or other impurities in the system may cause damage.

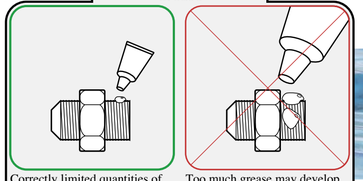
9. Sealing



Fittings in screwed components to be sealed with O-rings or bonded seals.

Using teflon tape or packing yarn in joints may cause damage.

10. Grease

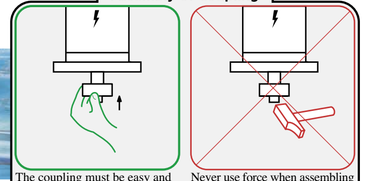


Correctly limited quantities of grease prevent seizing.

Too much grease may develop biofilm causing operational failures.

Wiring

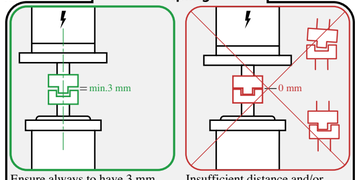
11. Assembly of Coupling



The coupling must be easy and simple to assemble (see product instruction).

Never use force when assembling the coupling parts, as this will damage the motor/pump.

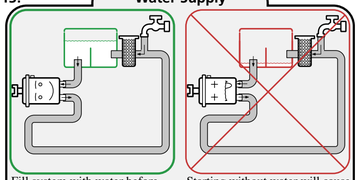
12. Coupling



Ensure always to have 3 mm distance between coupling flanges.

Insufficient distance and/or misalignment between the coupling flanges will damage the pump.

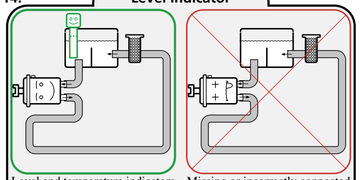
13. Water Supply



Fill system with water before starting to ensure lubrication and cooling.

Starting without water will cause damage.

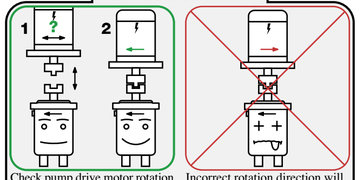
14. Level Indicator



Level and temperature indicators must be fitted. Follow installation instructions.

Missing or incorrectly connected level and temperature indicators cause damage.

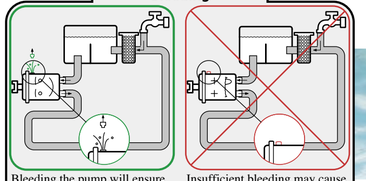
15. Rotation Direction



Check pump drive motor rotation direction matches that of the pump prior to installation.

Incorrect rotation direction will damage the pump.

16. Bleeding



Bleeding the pump will ensure correct cooling and lubrication.

Insufficient bleeding may cause damage (not applicable to Power Packs).

Starting Procedure

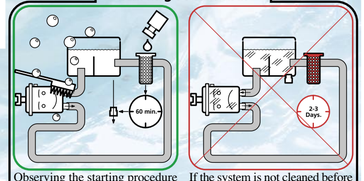
Cleaning procedure

1. Fill cold water into the system via the return filter and bleed the pump. (Power Packs PPH 4-6.3-10 and 12.5 are self-bleeding).
2. Start and bleed the system - without pressure by opening the bypass valve.
3. Add the cleaning agent to give 3% agent / water solution.
4. Run the system for 60 min. and activate all components as often as possible to ensure effective flushing with the cleaning agent.
5. Empty the system cleaning agent solution.

Flushing Procedure

6. Fill cold water through the return filter and bleed the pump. (Power Packs PPH 4-6.3-10 and 12.5 are self-bleeding).
7. Run the system for 30 min. and activate all components as often as possible.
8. Empty the water.
9. Alternatively the system may be flushed by running the plant without the return hose while continuously filling up water. The flushing should continue until there is no trace of cleaning agent in the return water.
10. Change the return filter element, fill cold water through the return filter and bleed the pump during start up.
11. **The system is now ready for operation.**

Starting Procedure.



Observing the starting procedure will ensure problem-free operation.

If the system is not cleaned before starting, the filter will clog.